

## CLAIMS

1. A sheath assembly adapted for use with an endoscopic insertion tube having a working end adapted to be inserted into a patient, the sheath assembly comprising:

a sheath including a body portion adapted to at least partially encapsulate the working end of the insertion tube and having a distal end portion adapted to be proximate the working end when the sheath assembly is positioned on the insertion tube; and

a biopsy sampling device attached to the sheath and including a collection member proximate the distal end portion.

2. The sheath assembly of claim 1 wherein the biopsy sampling device is attached to the body portion.

3. The sheath assembly of claim 1 wherein the body portion includes an outer peripheral surface, the biopsy sampling device being attached to the outer peripheral surface.

4. The sheath assembly of claim 1 wherein the sheath includes an enclosed end cap attached to the distal end portion, the biopsy sampling device being attached to the enclosed end cap.

5. The sheath assembly of claim 1 wherein the sheath includes an enclosed end cap attached to the distal end portion, the end cap having an outer peripheral surface, the biopsy sampling device being attached to the outer peripheral surface.

6. The sheath assembly of claim 1 wherein the biopsy sampling device includes a substantially rigid base member attached to the distal end portion of the sheath.

7. The sheath assembly of claim 1 wherein the collection member comprises a brush member.

8. The sheath assembly of claim 1 wherein the collection member comprises a brush member having a contoured shape adapted to at least partially conform to a curvature of the insertion tube.

9. The sheath assembly of claim 1 wherein the collection member comprises a needle.

10. The sheath assembly of claim 1, further comprising a cover member positionable proximate the biopsy sampling device, the cover member including an actuator extending along at least part of the body portion, the actuator being moveably coupled to the body portion for controllably actuating the cover member.

11. The sheath assembly of claim 10 wherein the cover member is slideably attached to the sheath.

12. The sheath assembly of claim 1, further comprising a cover member attached to the sheath proximate the biopsy sampling device and positioned proximate the biopsy sampling device to at least partially cover the collection member.

13. The sheath assembly of claim 1, further comprising a cover member attached to the sheath proximate the biopsy sampling device and being moveable between a first position at least partially covering the collection member, and a second position at least partially exposing the collection member.

14. The sheath assembly of claim 13 wherein the cover member is resiliently biased into the first position.

15. The sheath assembly of claim 13 wherein the cover member is hingeably attached to the sheath.

16. The sheath assembly of claim 13, further comprising an actuation member coupled to the cover member and extending along the body portion, the actuation member being moveable for controllably actuating the cover member from the first position to the second position.

17. The sheath assembly of claim 13, further comprising an actuation member coupled to the cover member and extending along the body portion, the actuation member being moveable in a first direction for controllably actuating the cover member into the first position, and being moveable in a second direction for controllably actuating the cover member into the second position.

18. The sheath assembly of claim 13, further comprising:

a channel attached to the sheath and extending along the body portion of the sheath; and

an actuation member coupled to the cover member and extending along the channel, the actuation member being moveable for controllably actuating the cover member from the first position to the second position.

19. The sheath assembly of claim 1, further comprising a channel extending longitudinally along at least part of the body portion and having an opening adapted to be proximate the distal end of the insertion tube when the sheath assembly is positioned on the insertion tube.

20. The sheath assembly of claim 1 wherein the body portion comprises an elastomeric tubular portion.

21. The sheath assembly of claim 1 wherein the body portion is adapted to tightly surround a distal portion of the insertion tube when the sheath assembly is positioned on the insertion tube.

22. A sheath assembly adapted for use with an endoscopic insertion tube having a working end adapted to be inserted into a patient, the sheath assembly comprising:

a sheath including a body portion adapted to at least partially encapsulate the working end of the insertion tube and having a distal end portion adapted to be proximate the working end when the sheath assembly is positioned on the insertion tube;

a biopsy sampling device attached to the sheath and including a collection member proximate the distal end portion; and

a cover member attached to the sheath proximate the biopsy sampling device, the cover member being moveable between a first position at least partially covering the collection member, and a second position at least partially exposing the collection member.

23. The sheath assembly of claim 22 wherein the cover member includes an actuator extending along at least part of the body portion, the actuator being moveably coupled to the body portion for controllably actuating the cover member.

24. The sheath assembly of claim 22 wherein the cover member is slideably attached to the sheath.

25. The sheath assembly of claim 22 wherein the biopsy sampling device is attached to the body portion.

26. The sheath assembly of claim 22 wherein the sheath includes an enclosed end cap attached to the distal end portion, the biopsy sampling device being attached to the enclosed end cap.

27. The sheath assembly of claim 22 wherein the sheath includes an enclosed end cap attached to the distal end portion, the enclosed end cap having an outer peripheral surface, the biopsy sampling device being attached to the outer peripheral surface.

28. The sheath assembly of claim 22 wherein the collection member comprises a brush member.

29. The sheath assembly of claim 22 wherein the collection member comprises a needle.

30. The sheath assembly of claim 22 wherein the cover member is resiliently biased into the first position.

31. The sheath assembly of claim 22 wherein the cover member is hingeably attached to the sheath.

32. The sheath assembly of claim 22, further comprising a control member coupled to the cover member and extending along the body portion, the control member being moveable for controllably actuating the cover member between a first position and a second position.

33. The sheath assembly of claim 22, further comprising an actuation member coupled to the cover member and extending along the body portion, the actuation member being moveable in a first direction for controllably actuating the cover member into the first position, and being moveable in a second direction for controllably actuating the cover member into the second position.

34. An assembly for collecting biopsy samples, comprising:  
an endoscope having an elongated insertion tube;  
a sheath including a body portion at least partially encapsulating a distal portion of the insertion tube; and  
a biopsy sampling device attached to the sheath and including a collection member proximate an end of the body portion.

35. The assembly of claim 34 wherein the biopsy sampling device is attached to the body portion.

36. The assembly of claim 34 wherein the sheath includes an enclosed distal end, the biopsy sampling device being attached to the enclosed distal end.

37. The assembly of claim 34 wherein the sheath includes an enclosed distal end having an outer peripheral surface, the biopsy sampling device being attached to the outer peripheral surface.

38. The assembly of claim 34 wherein the collection member comprises a brush member.

39. The assembly of claim 34 wherein the collection member comprises a brush member having a contoured shape adapted to at least partially conform to an outer curvature of the insertion tube.

40. The assembly of claim 34 wherein the collection member comprises a needle.

41. The assembly of claim 34, further comprising a cover member attached to the sheath and positionable proximate the biopsy sampling device to at least partially cover the collection member.

42. The assembly of claim 34, further comprising a cover member having an actuator extending partially along the body portion, the actuator being moveably attached to the sheath, the cover member being positionable proximate the biopsy sampling device to at least partially cover the collection member.

43. The assembly of claim 34, further comprising a cover member attached to the sheath and moveable between a protecting position at least partially covering the collection member and a collecting position at least partially exposing from the collection member.

44. The sheath assembly of claim 43 wherein the cover member is resiliently biased into the protecting position.

45. The sheath assembly of claim 43 wherein the cover member is hingeably attached to the sheath.

46. The assembly of claim 43, further comprising a control member coupled to the cover member and extending along the body portion, the control member being moveable for controllably actuating the cover member between the protecting and collecting positions.

47. The sheath assembly of claim 43, further comprising an actuation member coupled to the cover member and extending along the body portion, the actuation member being moveable in a first direction for controllably actuating the cover member into the protecting position, and being moveable in a second direction for controllably actuating the cover member into the collecting position.

48. The assembly of claim 34 wherein the body portion is adapted to tightly surround the distal portion of the insertion tube.

49. The assembly of claim 34 wherein the body portion comprises an elastomeric body portion.

50. A method for obtaining a biopsy sample from a target within a body, comprising:

providing an endoscopic assembly including a sheath having a biopsy sampling device attached thereto, the biopsy sampling device having a collection member proximate a distal end of the endoscopic assembly;

inserting at least the collection member into the body;

engaging the collection member with the target; and

removing the collection member from the body.

51. The method of claim 50 wherein providing an endoscopic assembly comprises providing an endoscopic assembly including an insertion tube adapted to be inserted into the body, at least a distal portion of the insertion tube being at least partially encapsulated by a sheath having a biopsy sampling device attached thereto, the biopsy sampling device including a collection member proximate the distal portion of the insertion tube.

52. The method of claim 50 wherein providing an endoscopic assembly comprises providing an endoscopic assembly including a sheath having a body portion at least partially encapsulating a distal portion of an insertion tube, and a biopsy sampling device attached to the body portion.

53. The method of claim 50 wherein providing an endoscopic assembly comprises providing an endoscopic assembly including a sheath having an enclosed distal end and a biopsy sampling device attached to the enclosed distal end.

54. The method of claim 50 wherein providing an endoscopic assembly comprises providing an endoscopic assembly including a sheath having a biopsy brush attached thereto.



56. The method of claim 50 wherein inserting at least the collection member into the body comprises inserting the biopsy sampling device and a distal portion of the endoscope assembly into the body.

58. The method of claim 50 wherein providing an endoscopic assembly comprises providing an endoscopic assembly including a sheath having a cover member proximate the biopsy collection member, and wherein the method further comprises, prior to removing the collection member from the body, actuating the cover member to at least partially enclose the collection member.